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ABSTRACT

This working paper treats research progress on educational accountability. The document first defines accountability and provides its historical background, gives some reasons for its current popularity, and establishes its relationship to the society that engendered it. Next, the paper focuses on the two major issues in accountability -- (1) its tools and techniques and (2) the way in which they are combined and put to work. Within the framework of the first issue, there is discussion of testing and evaluation incentives, collective bargaining, and institutional competitiveness. Scapegoating and the question of local control versus national standardization are taken up under the second issue. The document concludes with a discussion of various plans to implement accountability, such as incentive pay for teachers, performance contracting, program planning and budgeting systems, educational vouchers, and alternative schools within the public school system. (Author/JF) CH

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I EXECUTIVE SUMMARY

The present renewed interest in accountability stems primarily from the perception that the schools are failing to educate and failing to make responsible use of public funds. Rather than trying to change specific instructional techniques, the proponents of accountability are looking at the way accountability functions in the administrative and regulatory processes that govern the educational system; they feel that if they could get the system to allow and appropriately reward successful means of educational improvement, educational renewal would result.

The potential products of accountability are many and varied; it could (1) enhance performance incentives through feedback and competition; (2) increase quality control locally and raise quality to national standards; (3) add to the knowledge of the mechanics of the learning process; (4) change the incentive structure to promote innovation, equalization of educational opportunity, and so forth; and (5) change the distribution of power and the locus of decision-making.

Accountability depends strongly on the societal framework, i.e., the values held by the members of society, the goals that the society is pursuing and the extent of the agreement on those goals, and the distribution of power and authority within the society. The issues in accountability raised by this societal framework include:

- Testing and evaluation--Basic skills such as reading and arithmetic are the only ones that can be acceptably measured at present with standardized tests; explicit accountability for other areas must depend on different techniques of evaluation.

- Incentives--Any accountability system must apply extrinsic incentives and stimulate intrinsic incentives to function. Incentives used must be consonant with societal conceptions of human nature, must be considered effective, and need to succeed in motivating the participants in the system in the desired ways.

- Collective bargaining in education--Teacher contracts can be a powerful tool for accountability, as they form one of the only bodies of written statements of the responsibilities allocated to one role. Teacher collective bargaining provides for a formalization of accountability, but can also increase the pressure for conformity among teachers and hinder change and innovation.

- Institutional competitiveness and incentives--The present educational institution has a virtual monopoly; the competition that enables the free-market system to function, if incorporated into education either between public schools or between the public and private sectors, might serve as an incentive to educational innovation and renewal.

- Freedom of action versus assurance of results--One of the central issues that accountability must face is the conflict between the demand for more freedom and diversity in the schools and the demand for greater assurance of results. Unless more freedom and diversity exists, the schools probably will not be able to make the needed innovations and changes; but that freedom will probably not be granted unless results are assured, and the results of innovation are rarely certain.

- Scapegoating and the locus of problem solving--Accountability will be no more than scapegoating unless the responsibility for results is accompanied by the authority and resources to produce the results. A rejuvenated role for the school principal seems central to this at the district level.

- Local control versus national standardization--Increasing state and federal shares of educational finance are bound to alter the power structure in the educational system. National action is needed to provide equal educational facilities and opportunity across the nation; if federal funds are channeled through the states, these tasks might devolve on the state level. Local control is desired to allow for cultural pluralism, effective individual and small-group action, and increased institutional responsiveness to changing educational needs.

Currently advocated plans for increasing the formal assignment of responsibility within the regulatory process of education--accountability--include incentive pay for teachers, performance contracting, program-planning-budgeting systems (PPBS), educational vouchers, and alternative schools within the public system.

The plans differ in identification of the basic problem in the educational system and in designation of appropriate problem-solvers. PPBS, incentive pay for teachers, and alternatives within the system all see current school personnel as capable of solving the problems. Both performance contracting and educational vouchers look outside the public school to private firms to improve education. The plans focus on local district actions, while the state can function primarily through selection of plans and the development of criteria, guidelines, funding support, and implementation requirements.

If the desire for increased accountability is to be more than mere rhetoric, it must effect some change--change in the collection and use of information, change in the decision-makers, or change in the distribution of power. Unless these change, there will be no increase in accountability.

II THE CONTEXT

Accountability is a rallying point for those interested in improving education. In the great concern of contemporary society for our educational system, accountability has become an important catchword, although it is not a new phenomenon. Some form of accountability however informal always has existed, and in the past, movements have pressed for a more formal accountability in the educational system when the trust level among the stakeholders in the system drops. In a survey taken in the spring of 1970, Gallup Poll found that 67 percent of the adults favored "a system that would hold teachers and administrators more accountable for the progress of students."[1]

To analyze accountability, with its numerous meanings and connotations, it is necessary first to create a context in which to view it--the definition of the term, the history behind the idea, the reasons that it is of current interest, and the relationship of the idea to the society in which it originated.

Definition

There is little agreement as to the exact meaning of accountability. Dictionaries define it as "the condition of being accountable, liable or responsible," or as the state in which one "makes or renders a reckoning as of funds received and paid out."[2] However, accountability, as used in current educational literature, has been defined as everything from "when resources and efforts are related to results in ways that are useful for policy-making, resource allocation, or compensation"[3] to "the guarantee that all students without respect to race, income, or social class will

acquire the minimum school skills necessary to take full advantage of the choices that accrue upon successful completion of public schooling."[4] As used by the majority of educators, accountability connotes a more formal assignment of responsibility within the regulatory process than currently is made.

The model of the regulatory process that governs most systems consists of five steps is shown in Figure 1: (1) determination of goals, (2) delineation of the existing situation and the desired situation, (3) selection of methods from among the existing alternatives and their implementation, (4) evaluation of the effort, and (5) corrective action. To improve regulation of the educational process, the responsibility for each step must be considered. Some of these steps lie wholly within the educational system; some, such as goal-setting, are a function of the society as a whole and its relationship to education. Each step depends in part on the one before it, although critics of the present system feel that evaluation has too little bearing on corrective action. The steps should not be discussed in isolation; for instance, without specific goals, the desired situation cannot be described except in terms of, say, institutional survival. In discussing a specific method for improvement of the educational system, the provisions that are made for each step should be considered. For example, some accountability plans, such as program planning and budgeting, are much stronger on providing evaluative information than on prescribing corrective action.

Feedback loops in our present regulatory system enable policy setters and disbursers of funds to exert a measure of control over the system as shown in Figure 2. However, present emphasis is on evaluation of the inputs to the learning process; e.g., per capita expenditures, class size, and teaching materials, rather than on the output of the educational process. Professor Dwight Allen (head of the School of Education at the University of Massachusetts) points out that accounting methods of school

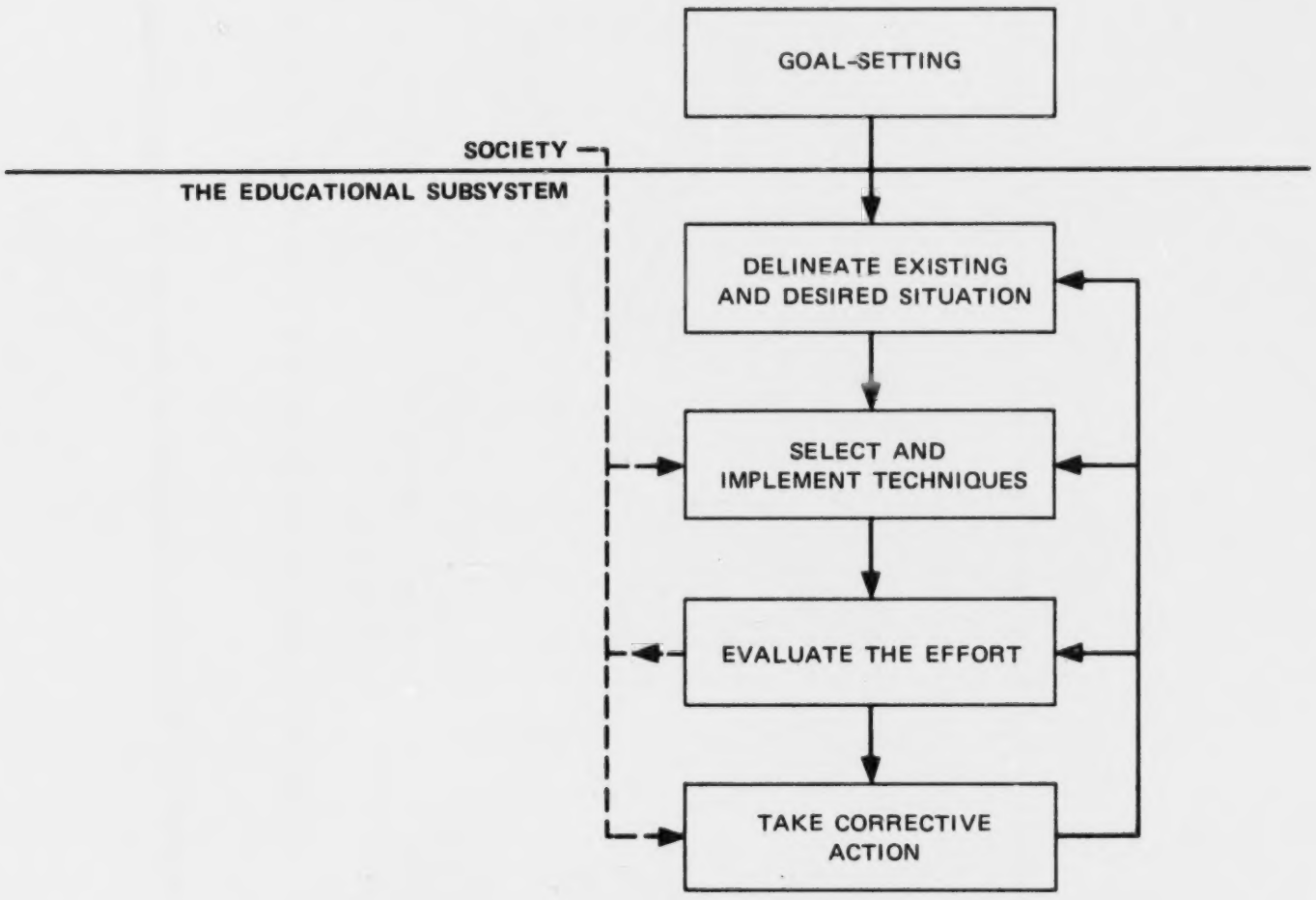

FIGURE 1 THE REGULATORY PROCESS

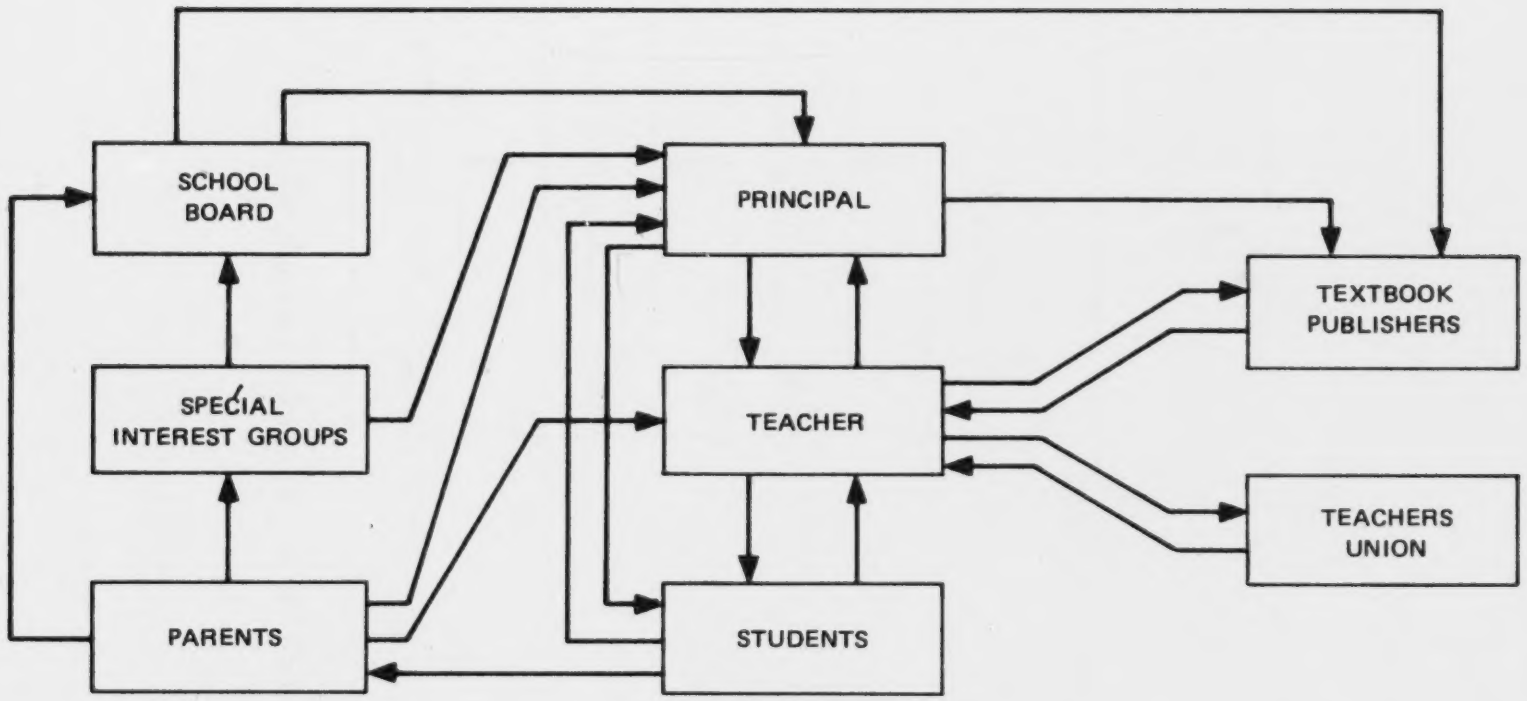

FIGURE 2 FEEDBACK LOOPS INFLUENCING THE INDIVIDUAL CLASSROOM

systems are irrelevant for purposes of devising educational strategy. Per-pupil expenditures do not really tell what it costs to educate a student; all they measure is what it costs to keep a student seated for a year. A much more relevant measure, Dr. Allen argues, would be a "learning-unit" cost--the total sum, including teacher's salary, portion of the total building expenses, cost of textbooks and other learning materials required to move a student from one skill-level in reading, writing, or math to the next highest level. ". . . Developing such a new accounting system would enable educators to show the public how much learning was produced by a certain amount of investment."[5] Such a system of quantitative and qualitative input-output relationships is the goal of the advocates of accountability.

Historical Background

The request by the public that the educational system base corrective action on the results of evaluation is not a new phenomenon. In the first decades of this century, the rise of "scientism" brought a demand for more efficiency in education and a greater exactness in reporting results. The methods that were proving so effective in the factory production line were prescribed for education. Schools were seen as needing efficiency experts; studies of "educational output" were conducted but resulted in few long lasting pedagogical changes. However, three important differences between today's movement for accountability and that of the early 1900s may make today's movement more fruitful: (1) the power structure is different; teachers then had little or no collective power, while today they are organized into powerful unions; (2) the emphasis is on the educational deficiencies of the disadvantaged; and (3) responsibility for failure has shifted from the individual to the school. A more detailed comparison is given in the Appendix.

Other countries have attempted to make education accountable. Most of their attempts were abandoned because they either were not effective enough to be worth the trouble or were too difficult to administer. Most of these took the form of merit pay for teachers. At the University of Bologna in the 15th century, student-enacted statutes required that the "professor start his lectures at the beginning of the book, cover each section sequentially, and complete the book by the end of the term;" if the professor failed to achieve the schedule, he forfeited part of the funds that he himself had to deposit at the beginning of the term.[6] In 1870, the Education Code of Sierra Leone provided for a result grant of sixpence for each pass in the three Rs examination. This policy was an imitation of the English system, which was abandoned in England in 1897.[7] In the 1950s, New Zealand and Japan both experimented with merit pay. The Japanese Teacher's Association, with 520,000 members, became engaged in a bitter struggle over the merit ratings with the Ministry of Education. The teachers looked on the merit pay plan as a move to place them and all education under the control of the national political parties; in 1958 they called a nationwide strike over this issue.[8] Teachers in the USSR are under a modified form of merit pay.

In the United States, there have also been examples of "paying for results" in education before the present push for accountability. Correspondence schools promise better jobs with higher salaries for their graduates; speed reading courses "guarantee" increases in reading speed. Many school superintendents and athletic team coaches are paid, and fired, on the basis of their success.

Why Accountability Is of Interest

Reasons for the present surge of interest in accountability are varied. The major one is the perceived failure of the schools to give

students the education they should have, the effect that their schooling has on their later lives, and the educational institution's use of funds. Also, there is a general feeling of societal malaise; many persons see education as the cure for society's ills and even in some cases the cause of them. Other reasons contributing to the interest in accountability are the current "vogue" in systems analysis and the desire of educators and laymen to find out exactly how the learning process functions, with a view to improving it.

The public perception of the failure of the present school system is widespread, as Martin Meyer, John Holt, and other noted critics have pointed out.* The education that children receive is seen as less than minimal in some instances; many children go through the educational system without ever learning to read, write, and cipher. Proponents of accountability, such as Lessinger, advocate the view that the schools are responsible for seeing that no children fail and that all children achieve a minimum level of skills.

Ideally, all students learn all the basic skills deemed necessary for coping with a complex society, as well as much cultural enrichment. Pragmatically, however, school personnel start with the premise that some children will inevitably fail. This premise is being questioned; how, ask Leon Lessinger and his supporters, can the educational system be thought successful when some of the citizens it is designed to educate remain ignorant and essentially rejected by the educational institution?

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* The exact extent of the dissatisfaction among the majority of parents is unclear. For example, despite the many critics of the educational system, the Harris Poll published in Life, May 16, 1969, showed that 71 percent of parents polled were satisfied with the high school their children attended.

If it is the responsibility of the school system to see that all students master the basic skills, the educational institution needs to be made more effective; at the same time, however, it must not be forgotten that there is much subject matter in the schools above and beyond the three Rs. The improvement of a particular function of the educational system must not prejudice the other functions of the system.

There is no real agreement on the mechanics of the learning process. When teachers demand more materials and smaller classes, with the plea that there is not even "the bare minimum necessary for teaching," no one knows enough to effectively counter the plea. Educators and laymen alike have a real interest in finding out how the learning process works.

The educational institution is also perceived to have been inefficient in its use of funds. The public is providing money and resources and has little idea of exactly what it is getting in return. Worry about funding education is coming to a head for several reasons. For example, one reason is that many of the nation's largest cities are having acute financial problems. The two biggest costs that are breaking the backs of the cities are education and welfare.[9] Costs of both are increasing relative to other fields, because costs of all services in which technology does not increase productivity go up inexorably in comparison with labor costs where productivity steadily increases and because of the rising fraction of people in schools and on welfare roles. Another reason for concern is the breakdown in the present system of funding based on local property taxes. The rising costs of education, the inelasticity of property taxes, and public dissatisfaction with education have resulted in the defeat of an increasing number of school bond and tax override elections.[10] Some schools have even had to close for short periods because of a shortage of funds, as in Dayton, Ohio.

Many critics of the way the educational institution handles funds suggest that the methods that have proved so efficient in business and industry be applied to the educational system. The techniques of auditing, systems analysis, and the systems approach have been recommended as potentially very useful in education. Also, many tools have been suggested for enhancing quantitative analysis within the system, including needs assessment, measurable performance objectives, PPBS (Programming Planning Budgeting System), method-means selection techniques, PERT (Program Evaluation and Review Technique), and CPM (Critical Path Method).[11] These all focus on one or more parts of the regulatory process; what is sometimes ignored is that the parts of the process they are designed to improve are not always wholly within the educational system and thus within the scope of the educational institution to improve. Measurable performance objectives, for instance, are a function of the goals that need to be set by the society.

In considering a demand to use business techniques in a school system, the parallel between the business and educational worlds must be carefully examined. In business, the power holders are few; the government exerts some regulatory power, the unions are a factor in determining production costs, and the customer is the judge of the end product. In the educational world, however, matters are not equally clear. The student as client exercises very little power over approval or disapproval of results; the public as client exercises power in many direct and indirect ways. In education, unlike business, the disbursers of funds rarely have more practical power than that of the veto--they can refuse to fund anything that is very much out of the ordinary or that does not seem to them sensible or promising--but politics, rather than efficiency, influences many decisions that they make.

The educational system has also been perceived to fail in providing equality of educational opportunity. Partly, this reflects the complaints

of minority groups. Also, it reflects the growing fraction of "unneeded people"--those out of work or in make-work positions. The problem of unemployment cannot be solved by education alone; if all unemployment were structural (that is, a result of the lack of appropriate education or training), the educational institution might play a major role in its elimination. However, most unemployment is due to insufficient demand--there are not jobs enough for everyone, regardless of their education and training.[12]

Many other problems of society that contribute to the general malaise are felt to be the result of poor educational policy or to be the responsibility of the educational institution to cure. This reflects a trend toward institutionalization of solutions, which is evident in many areas of society. For instance, the penal institutions are no longer supposed simply to isolate the criminal from society and punish him; they are also supposed to rehabilitate him and make him a functioning member of society--formerly the responsibility of the criminal. The basic question that this shift in educational responsibility poses is whether educational programs can be developed that interest and motivate the student in the face of decreasing family and personal responsibility for educational results. However, although the responsibility for educational results lies with the institution and the professional, the individual still suffers the consequences of a poor education and benefits from a good one. It is this dichotomy between responsibility and repercussions that is causing the great demand for improvement in the educational system. Parents, especially minority group parents, are not really willing to relinquish the education of their children into the hands of those whom they feel will do a poor or biased job.

The attitude of the proponents of accountability is that it can enable education to meet these demands; it is the logical, necessary

next step in the improvement of our educational system and that it is inevitable. Very few criticisms of accountability are based on general, philosophical grounds; most of the critics object to specific consequences of some of the various implementation schemes such as performance contracting, educational vouchers, and incentive pay for teachers. Perhaps most educators, agreeing with Myron Lieberman, see that "the underlying issue is not whether to have accountability, but what kind of accountability will prevail."

Relationship of Accountability to Society

Much of the present agitation for accountability stems from the fact that people perceive that the educational system is not fulfilling its goals. An abundant and perennial crop of proposals is designed to make the schools more efficient and effective. Various problems are suggested as the true cause of the malaise of the school system--the curriculum, the training that teachers receive, the lack of responsibility for results, the lack of sufficient funds for the schools to hire sufficient personnel and buy sufficient materials. Classes are criticized as too large, teachers are stigmatized as uncaring and concerned only for their salaries, legislatures are accused of not understanding the "real issues" and being more concerned with balancing the budget than with the quality of education, and so on. Into this chaos accountability is introduced as the rescuing instrument of effective management.

If accountability were certain to make the schools more efficient in fulfilling their goals, everyone would approve of it. But this glosses over a major problem--exactly what goals the educational system is supposed to be fulfilling. A clear-cut statement of goals has been avoided by tacit agreement, for the goals are not clear at all. As H. T. James[13] observed, "We have been notably unsuccessful as a society in this century

in stating our aims of education." What agreement there is centers around vague generalities; as Henry Dyer said,[14]

> Educational goals, as commonly formulated by educational philosophers, have tended to be cast in such sweeping generalities and remote ideals that they have left school people at a loss to use them meaningfully for assessing the actual ongoing operations of their institutions. . . . The educational oratory speaks of goals like "self-fulfillment," "responsible citizenship," and "vocational effectiveness"; the assessment of school efficiency in specific cases usually depends on such measures as retention rate, average daily attendance, and performance on reading tests. Whether there are any rational connections between the numbers and the slogans is a matter that is rarely considered. The assumption seems to be implicit, for instance, that the longer a youngster stays in school, the greater will be his chances of self-fulfillment; or that the higher his reading score, the more likely he will become a responsible citizen. But such assumptions are left largely unexamined, and in particular cases may be obviously wrong.

The great agitation to "Make the schools do their job" serves to obscure the fact that no one can say what their job is. The truth of the matter is that little consensus on goals exists for the entire educational system.

It is politically expedient to fulfill any goals on which there is a consensus. If a more formalized assignment of responsibility within the regulatory system of education will help to meet such goals, then to that extent it is desirable. The goals for which consensus exists, other than vague generalities, are few--basic skills such as reading and writing, which "everybody who has been to school knows."

If accountability were made explicit and rigorous for goals on which insufficient consensus existed, change in these goals and in the educational system would probably be deleterious to the system as a whole. Either it would come in the form of rebellion against "unfair" and "irrelevant" goals on the part of all stakeholders who took no part in setting

the goals, or the whole aspect of the goal structure would change suddenly when a new group of people with different views came into power. Both methods of change make the system unstable; and if the educational system is to last, it must be stable both in the short run, so that people are comfortable functioning in it, and in the long run. The possibility of massive policy change in a short period of time would make participants in the system uncomfortable; the teachers' unions would protest violently against any system that meant that the content of courses and even teaching methods could change suddenly and significantly. The absence of openness to change that would result from imposition of goals on which there was no consensus (which would be the result of trying to make explicit the goals of the educational system as a whole) and the attempt to enforce these goals with rigid accountability would cause even more discontent with the educational system than now exists.

The educational institution must function within the larger societal context. If the society is not clearly agreed on the goals that it expects the institution to fulfill, the institution is left to "do the best it can"; i.e., juggle its resources so that it both ensures its own survival and satisfies as many of the demands made on it as possible. Society has a consensus on a few goals for the educational system; it is politically sensible to fulfill these goals. If educational authorities try to state explicitly other goals on which there is no consensus and try to impose these goals on the educational system, the stakeholders that have no part in the imposition of these goals will object. Thus, it is not feasible for education to supply the goals that the society is unable to specify; the educational system must work within the goals or lack thereof provided by the societal system as a whole. In general, in the

political world, when there is little consensus on goals, some ambiguity is needed as a lubricant to arrive at any agreement on decisions for action. However, the push for accountability is characterized by simultaneous (1) lack of agreement on goals and (2) push for less ambiguity. The tension thus created increases the potential of accountability to either ameliorate or exacerbate societal pressure and dissatisfaction with the schools.

III ISSUES IN ACCOUNTABILITY

The results that are predicted for accountability need to be examined in the broad perspective of how these results affect society and what effect the changing society will have on accountability.

Accountability could increase the effectiveness of schools, enhancing performance incentives through feedback and competition, increasing quality control against both local and national standards, and improving the state of knowledge about the mechanics of the learning process. Also, it could foster institutional change, altering the incentive structure to promote innovation and equalize educational opportunity. Then again, it might transfer to the schools more of the responsibility for societal problems such as providing skills that prevent poverty and unemployment.

If the present dominant societal values remain ascendant in the future, some of these results would be emphasized more than others. Current values emphasize (1) the development of the scientific method and concomitant technological advance, (2) industrialization through division of labor, (3) a positivistic theory of knowledge, and (4) acquisitive materialism and the work ethic, with progress defined as technological and economic growth.

These values encourage the enhancement of performance objectives, the development of competition within education, and (at least nominally) quality control. The reliance on technological solutions to societal problems, including educational ones, would remain great; tools such as teaching machines and computers would be experimented with to an ever-increasing extent; problems that seem to have no easy solution would be

considered solvable with a greater application of resources to technoeducational research. While educators will grant that not much is known about the mechanics of the learning process, they will be more concerned about operative success than about the underlying premises for their actions.

These dominant values are not the only ones to consider. There are signs of new values that might well grow into a dominant position in our society; they are foreshadowed in the growing participation in the human potential movement, underground movements designed to undermine dominant values, and scientific and popular interest in the realm of subjective experience in which the most fundamental beliefs and values of a culture are rooted. These values would probably change toward a more person-centered society which emphasizes the unique worth of each man. The basic premises and goals inherent in these values are not new--the goal of a person-centered society was at the heart of the Declaration of Independence--it would be the action of becoming dominant and operative of these premises and goals that would be new.

Such a changed value system would encourage the use of accountability as a means of finding out more about the mechanics of the learning process; in a person-centered society, learning for one's own sake, as well as learning to meet the needs of society, would be considered worthwhile. Institutional change would also be encouraged to deflect institutions from their present emphasis on satisfying the common needs of society toward the diverse needs of individuals; forms of accountability that promoted institutional change such as the voucher plan would be emphasized. However, accountability would not be used to transfer to the schools the responsibility for societal problems, since individual solutions would be emphasized more than institutional ones.

The other side of the question is whether accountability in general or specific accountability procedures would tend to promote or circumvent this possible change in values. The many possible results of accountability show that it is a versatile tool, not likely to have an effect on value change in and of itself. The crucial issue is how the accountability is used--who is accountable and to whom and for what. If a small unit within the system is held accountable by the managers of a larger unit within the system, the emphasis would be on effiency and industrial techniques with clear division of labor. The techniques basic to industrial-state values would be used, and the "success" of the school system would be measured on systemwide goals, e.g., reading and writing tasks.

On the other hand, if schools were held accountable to the consumers--parents and students--and emphasis were placed on the needs for individual diversity, the result could be very different. The emphasis on individual goals and individual judgment would encourage change toward a more person-centered society. If the efficiency of a school depended on how well it satisfied its clients, rather than on how well it fulfilled goals set by the society as a whole, individual solutions would be stressed more than institutional ones, and all institutions, including government and education, would operationally become the servants of the individual rather than his master. Common systemwide goals would come only for the shared desires of individuals in the society, e.g., to learn to read and write, rather than the assessment of requirements of a central authority.

We now turn to an examination of specific issues in accountability. Two types of issues essential to the discussion of accountability are: (1) tools and techniques and (2) the way in which these are combined and put to work. Existing techniques of testing and evaluation, as well as the way in which the society regards them, are important. The incentives and disincentives used to make any accountability system

function can be instituted by mechanisms such as teacher contracts and competition. The tools and techniques can be applied in many different ways; conflicts between freedom of action and assurance of results and between local control and national standardization arise in the use of these tools and techniques.

Tools and Techniques

Testing and Evaluation

The techniques for testing and evaluation are crucial to an accountability system; they determine the feedback into the regulatory system. In general, three parts of the system can be evaluated: the input, the output, and the process.

The input into the educational process includes such variables as funding and other resources, basic research, expertise, and plant facilities; at present the most common measure of it is dollar value. Problems with measuring input are caused mostly by the accounting systems currently in use and the difficulties of apportioning plant and operating costs among educational programs. Educational expenses are usually divided up into categories dependent on who the recipient of the funds is rather than the purpose that the funds are being used to further; for instance, funds are often allocated separately to the English department and library, rather than to a specific reading program which concerns both. Accounting systems, such as PPBS, have great potential for clarifying exactly what inputs are made to which programs.

The output of the educational system includes modification in student behavior, knowledge, and skills acquired. Problems in testing and evaluating output are much more severe than those entailed in evaluating input. Robert E. Stake sums up the problems and potential of psychometric testing:[15]

> Many educators believe that the most human of human gifts--the emotions, the higher thought processes, interpersonal sensitivity, moral sense--are beyond the reach of psychometric testing. Most test specialists disagree. While recognizing an ever-present error component, they believe that anything can be measured. . . . They are not so naive as to think that any human gift will manifest itself in a 45-minute paper and pencil test. They do believe that, given ample opportunity to activate and observe the examinee, any trait, talent, or learning that manifests itself in behavior can be measured with reasonable accuracy. . . . A question for most test specialists, then, is not "Can complex educational outcomes be measured?" but "Can complex educational outcomes be measured with the time and personnel and facilities available?"

Distinct problems arise with the use of currently available tests to measure the output of the learning process. Achievement tests, which are the most widely used, measure only <u>correlates</u> of educational gains, not the actual gains. Correlation of these tests with general learning is often high, but correlation with specific skills and knowledge items is only moderate. Criterion-referenced tests, on the other hand, which do measure gains on specific items in the curriculum, are not so much in demand; they do a poor job of predicting future performance, either in general or on specific items. In addition to these problems, a variety of errors beset testing.[16] So while evaluation of the output of the educational process has many obvious advantages, it currently is feasible in only a limited way.

The <u>process</u> of education includes teacher performance, student behavior, and student-teacher interaction. Of these, it is teacher performance that is most often suggested as the subject of evaluation; in the past, the student was rewarded or penalized almost, if not solely, on the basis of his behavior and performance, and this is now seen as unfair by many. But evaluation of teacher performance is not an easy matter either. There are so many extraneous variables that have such a large effect: student ability, student motivation, the constraints

imposed by the particular school environment, and so on. No one has ever been able to successfully define good teaching--there are so many techniques that can work at times for particular teachers and students but also fail at other times. Teacher evaluations also run into the problem of evaluations changing the observed behavior: classroom observers usually change class behavior drastically. Until better ways for monitoring the process of education are devised, it is not generally feasible to base accountability on evaluation of the process.

The attitudes toward testing and evaluation that are prevalent in the future will also go far toward determining what sorts of accountability systems are socially and politically feasible. For example, will it be the effort that is made (i.e., input and process) that is the most important, or will it be the results that are more important? If the desired result of education were believed to be immeasurable, the focus would be on input accountability and not on output or process. On the other hand, present values emphasize efficiency, which in turn is measured by results--output. Thus, the techniques of testing and evaluation used in the future will be determined not only by the state of the art but also by the prevailing values.

Incentives

The incentives that are used to motivate the participants in an educational system to play the roles assigned them determine to a large extent the success or failure of the system. In most situations in education, the needs that must be met, i.e., the objectives of the system, are determined by persons other than those charged with meeting the needs. In this case, extrinsic motivators, rewards and punishments, are most often used. Extrinsic motivators are most effective when the task being done is routine and well within the capabilities of the person.

However, when the task requires great dedication and uses many of a person's capabilities, the motivation must also be internal or intrinsic. In a period of changing educational needs and limited resources, the vision and dedication of those with intrinsic motivation are especially needed.

To be effective, any incentives used must be acceptable in the societal context. An incentive is acceptable if (1) its rationale is considered consonant with the nature of man and "the good" as defined by society, (2) it is generally considered to be effective, and (3) it actually succeeds in motivating the participants in the system in the desired ways. At present in our educational system, the third condition does not seem to hold; the incentives in the system seem to motivate participants toward ends such as stasis for personal security rather than the best education for students. Changes in the system proposed by proponents of accountability are directed toward disposing of these anomalies between goals and attendant objectives and the incentives built into the system.

Possible changes in society may alter its definition of "the good" and the incentives it believes to be efficacious. The present success or failure of incentives used in the educational institution (whether due to the effectiveness of the incentives or to some other factor) will have a significant influence on society's views as to which incentives are believed to be effective. In the long term this will affect the whole society, but in the short run it will probably affect only the practices in the educational establishment. In choosing an accountability system (whether the present or a new one), educational authorities must be cognizant of societal attitudes toward incentives as they now exist, and as they will exist as long as the system is in effect. This is especially important in the sphere of education, since it

concerns the young, who are at once learning to accept and work with the incentive structure as it stands and are most rebellious against it. Currently, educators "believe in" intrinsic motivators but rely heavily on extrinsic motivators. The nature of the motivators in use and those of potential use play a major role in an accountability system.

Collective Bargaining in Education

When acceptable incentives have been found, they must be incorporated into the system. Increasingly, this is being done through the medium of teacher contracts. Teacher contracts form the only body of written statements of the rights and responsibility allocated to one group of stakeholders. Thus, they can act as a powerful tool for accountability.

Teacher organizations have existed in the United States since the 19th century, but only since 1960 have they done any significant amount of collective bargaining.[17] Teacher negotiations are influential in determining two important facets of school operation: their own roles and their place in the power structure. Contrary to popular belief, teacher negotiation in general does not remove power from the administration and deliver it to teachers. For one thing, traditional collective bargaining is in essence an affirmation of and an adaptation to the status quo, which in most cases leaves the managerial structure of the organization intact, merely changing its behavior.[18] For another, giving power to the teachers does not necessarily take it away from the administrators; increasing the power of the teachers may result in an increase in total power of the local educational unit and the correlates of more effective coordination and integration of the activities within the school.[19]

The contract sets the roles of the teachers and their working conditions. Items included in working conditions are length of the school year, length of the school day, class size, preparation time, amount and use of free time, relief from clerical and other nonteaching chores, supervisory chores, meetings beyond the regular school day, salary, and grievance procedures. These items resemble those that concern most labor unions and are embryonic forms of input accountability. However, collective bargaining in education also operates in determination of school policy. Teachers have always had some say in determining school policy, whether directly through decision-making power delegated by the administration or indirectly through advising the principal, superintendent, and school board. Negotiations between teachers and school authorities provide an opportunity for codifying the way in which policy decisions are made and for airing differences of opinion as to who should be responsible for decisions on each issue, a prerequisite for establishing formal accountability. There is a danger in deciding such educationally relevant issues at the bargaining table if an impasse should be reached and an impartial board (such as a labor mediation board) makes decisions about education policy of which it has little or no knowledge.

Thus teacher negotiations have both positive and negative implications for the introduction of more formal methods of accountability into education. On the positive side, teacher contracts provide an opportunity for a practical method of formalizing some types of input and process accountability and perhaps even for making teachers accountable for at least some facets of their performance (although the difficulties of evaluation of teacher performance remain great). Also, the increasing power of teachers brought into being through collective negotiations makes it more important that the accountability plan used is agreeable to all the stakeholders. On the negative side though, collectivization of teacher power increases the pressure for conformity among teachers and rigidity in

work rules, which in turn hinders a flexible adaptive approach to new problems, a key element in initiating most change and innovation.

Institutional Competitiveness

The educational institution has been charged with "institutional monopoly" primarily by advocates of alternative institutions and voucher plans. They quote many economists on the evils of monopoly and argue that basic principles of free enterprise are violated. However, the most important matter is not whether monopoly in education is unethical (since it has existed in this country for so long and has continued to exist, we may assume de facto support for the idea), but whether education would better serve the nation if it ceased to be a monopoly in the present day and age.

There are two powerful arguments for the adoption of some sort of alternative system so that competition would exist between the present schools and any new systems that may develop; both concern incentives. One argument revolves around the pluralism that exists in the United States currently on the idea of goals. If there were alternative institutions then each institution could state its own goals, and the people who agreed with those goals could patronize the school. This would be an important step toward satisfying the conflicting demands of different groups in the society and would avoid the ruinous political confrontation that comes from attempting to make one institution meet diverse needs. The clients of the educational system--parents and students--would be motivated to support the system and to act constructively instead of destructively in criticizing a system over which they have insufficient power to induce change.

The other argument concerns school personnel and operations. It suggests that competition serves to supply people with intrinsic motivators--the way to make educators more effective is to allow them to develop their best ideas with fewer bureaucratic restrictions and to sort out the best through competition and through testing against society's perception of its needs.

The forms of competition in the present system are limited, e.g., competition for positions among professionals and competition for funds among programs. But this competition is limited by the preference that is given to the traditional ways of doing things. In a more competitive situation the major criterion would be how well a method or program was perceived to educate and not how well it fit in with existing programs. A basis for judgment would be skills acquisition, but the satisfaction of the student throughout the educational process would also be important, since he would know that alternatives were open to him.

The idea of competition among educational institutions has also been criticized. Some critics worry about the duplication of effort on the part of different schools and programs; since the cost of education is already so tremendous, why waste any of it by duplicating efforts? There is uneasiness about the appropriateness of using business methods in education; after all, the goals concern the nation's children, not a factory product. Yet no one denies that competition is a powerful incentive;* if educators were certain to want to educate children rather

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* While not denying that competition is an incentive, teacher organizations take the position that the teacher (and by implication the school) is already trying as hard as possible with relatively few exceptions. In their view, new resources rather than new incentives are needed.

than merely enable them to pass the tests that prove the educator has "succeeded," competition would be a healthy thing in education. However, the possibility clearly exists that the incentives would be wrongly directed. The unanswered question is whether the risk is short term--whether the risks are a function of the approach, or if they can be avoided by careful regulation of the system.

Freedom of Action versus Assurance of Results

In the quest for assurance of educational results, school administrators, LEAs and SEAs tend to use external incentives to get those in subordinate positions to do things as they perceive they should be done. This often results in a demand from those below them for more freedom of action. These two demands are often in conflict, for those who want greater assurance of results often deny innovators freedom of action. The conflict between the desire for assurance of results and the desire for freedom of action is particularly great in the present period of growing diversity, escalation of demands, and decreasing trust among stakeholders.

Freedom of action is demanded by the participants in the system who feel that they are without the power and control necessary to do a good job. Without power and responsibility, people are less likely to develop internal incentives and will respond with minimum effort to external incentives. They are less likely to reflect the vision and dedication that are so badly needed in the educational system.

Counteractive pressures for assurance of results come from many sources. The public is certainly demanding such assurance from the schools.* Also, many professional educators demand assurance of results

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* As shown in public opinion polls such as that taken in the spring of 1969 on public attitudes toward public schools by Phi Delta Kappan and CFK.

from those who would challenge current operating practices of education. Innovations instituted by "professionals" that are consistent with current operating practices are viewed as permissible experiments. However, innovations that represent wide breaks with current operating practices (often proposed by laymen) must assure results to gain professional approval. This has the merit of ensuring a measure of continuity in operating practices and selectivity in experimentation. However, it also eliminates many potentially useful innovations and changes in the educational system.

What accountability must do is to create professional and public confidence that the system will function well or that early and effective action to upgrade performance will be taken. If the actions and constraints that are basic to the educational system are delineated, then the innovator can have freedom from interference in the remaining areas to develop innovative ways of meeting educational needs.

For example, one area in which many people believe that the traditional school must be changed is in poverty areas where the school may be needed as a central service facility for the entire community. In that case, concentration on children to the exclusion of parents is dysfunctional in a way not true in middle class suburbs. Although few professional educators as currently trained would be especially effective or comfortable in such a school, they might well be persuaded to support the creation of such schools if there were assurance that the schools would be held accountable for improving the basic reading and arithmetic skills of the students, as well as for whatever the programs might seek to achieve of benefit for the entire neighborhood. This example is clearly naive in that more is at stake than merely tradition and belief. There are jobs, security, and a desire to retain power; but these areas can often be negotiated when they are reduced to specific, limited issues.

Accountability is the umbrella term under which many conflicts among educational stakeholders are being tested and negotiated. Two approaches to accountability, performance contracting and education vouchers, which are discussed in Section IV, are current focal points in attempts to find viable balances between freedom of action and assurance of results.

Uses of Tools and Techniques

Thus, the tools and techniques of accountability provide the performance measures and the incentives that can be used to affect the behavior of the participants in the system. The ways in which these tools and techniques can be used to make accountability systems function are described.

Scapegoating and the Locus of Problem-Solving

Scapegoating occurs when problem-solving efforts are inappropriately directed. When incentives are not congruent with objectives someone is given the responsibility for results without the power to accomplish them. In the educational system, the locus of problem-solving can be any of the levels differentiated by responsibility and function--that of the teacher, the single school, the district, and so on in successive steps to the state and national offices of education. Accountability would mean very different things at each level, since incentives would be of different magnitudes on different levels and because the problems of assignment of responsibility, supervision, and corrective action are very different. For the assignment of responsibility on any level to be more than scapegoating, it must be both useful and politically feasible.[20]

The first level, that of the individual teacher and classroom is where teaching actually takes place. Is it reasonable, as some claim,

that "we should make the teacher accountable since she is the one who should be teaching the kid?" The teachers feel that it is not reasonable. Helen Bain, president of NEA, holds that "It is pure myth that a classroom teacher can ever be held accountable with justice, under existing conditions. The classroom teacher has either too little control or no control over the factors that might render accountability either feasible or fair."[21] William A. Deterline emphasizes that "teachers and students fail, not because they don't try hard enough, but because of the limitations imposed upon them by the way they are forced to go about it."[22]

The teachers as a group have stated their willingness to be held responsible, if they were given the power to make the decisions and changes they feel necessary to teach successfully. According to Raoul Teilhet, president of the California Federation of Teachers, teachers "want to be held accountable for what we do, but we want some voice in the classroom." He feels that teachers "do not have a voice" in most school districts.[23] Teachers feel that "it seems that there should be some sort of mutual accountability so that the public cannot accuse teachers of failing to do their jobs, while at the same time it fails to provide adequate funds, thereby causing many of the teachers' problems. . ..Interlocking accountability. . .includes teachers, students, administrators, paraprofessionals, school boards, parents, and the public at large. This. . .would tend to eliminate such possibilities as administrators trying to make teachers the scapegoats for education's inadequacies."[24] Having accountability on the teacher level does not seem to fulfill either of the necessary conditions--it would not be useful unless the teachers had the necessary power, and if teacher reaction continues to be so uniformly negative, as it will unless the incentive structure is altered, it would not be politically feasible either.

On what level, then, should the accountability effort concentrate? On the highest level, the national level, the power and responsibility are too diffuse to make it really feasible to affect the incentive structure, except indirectly, as by exerting pressure on the states to use certain types of incentives rather than others. But the locus of responsibility, the focal point of the accountability system, must be pointed enough to be effective. As Wildavsky observes, "if all are in some vague sense accountable it will be difficult to hold anyone responsible. Making a large geographical district or the entire system accountable will prove too imprecise."[25] The specific techniques of accountability do not work well in large, vague areas. "Techniques of systems analysis and development as means of systematizing school systems, must concentrate on the smallest units of variability first. Accountability must be connected to <u>manageable</u> units of the educational social system, because inputs to large elements of the system are virtually impossible to measure and relate to goal achievement."[26]

It appears that the individual school represents a manageable unit with the principal providing the specific focus for accountability. There is much support for focusing accountability at this level.[27] In some cases, a small district might also function effectively as the focus of an accountability effort. However, if the level is any broader than a single high school and its associated feeder schools, most of the effectiveness of any explicit accountability push will be lost in organizational and bureaucratic complexities.

Local Control Versus National Standardization

Throughout U.S. history, there has been a power struggle among different governmental levels as to who shall exercise power over what. Under the Constitution, education is a function reserved to the states. The states have delegated substantial amounts of power to the localities,

and the local level traditionally has been the prime area of policy responsibility. It appears that within the next five years a major shift in educational funding to the state and federal levels will occur as a result of legal requirements, e.g., the Serrano decision, and as a result of the recommendations of national commissions which point to both the inequity and inadequacy of the local property tax base as the support for education. With increased funding will come increased control over the local education agencies, although this control can vary from requiring minimum conformance to fiscal requirements to actual program control. However, the loss of some problems at the local level, e.g., teacher salary negotiations, may effectively increase the district's ability to deal with other areas, e.g., instituting diversity of educational offerings within the district.

Some problems in education can best be met by national standardization. In these mobile and fast-moving times, a large percentage of the populace will get their education in several different schools in several different parts of the country, and they may well live and work in still different places. If there is not some measure of uniformity and standardization nationwide, each time a student is transferred to a school outside his old state, or even district, he will not fit readily into the new school. Also, unless some measure of correspondence exists between the educations offered at different schools, colleges and businesses will discriminate on the basis of geographical origin to get students and employees who are ready for the programs/jobs available.

Still another problem of national standardization is the great demand for equality of opportunity. Individual school districts have wide differences in the amounts of wealth and other resources to devote

to each pupil; states have difficulties equalizing educational opportunity because of the spread in per-capita income. But a national effort to equalize money and resources could overcome these state-local differences. It also can be argued that an educational system that was nationally standardized might provide a larger measure of national cohesion and unification than exists in the society today.

On the other hand, the forces for local control remain powerful because of the traditional deference to local prerogative which began in the colonial period. An additional reason for localism is the widespread feeling, especially among minority groups, that national standardization is nothing more than cultural imperialism. Many subcultures feel that the same education is not appropriate for students with very different backgrounds and inclinations, that, in fact, some students are being taught to despise the ways of life in which they were raised, as well as the people who raised them. Another reason that people want local control is that they feel that they could "do it better themselves;" that if they had enough control over local school operation, they could make certain that the education that their children receive would be effective and useful. National and state governments cannot adjust their policies sufficiently for the wide variation in local needs. The growing advocacy of this point of view is clear in the number of "free schools" that are springing up, staffed by parents and only one or two professionals. Rightwing rhetoric also supports local control against "communist takeover" of the schools as state power increases. Still another argument for local control is that having control over the educational process would give people a feeling of effectiveness rather than the feeling that they are caught in a "big machine" and have little choice about their own actions and destinies. The feeling of insignificance and powerlessness of the common man in the face of megalithic institutions is one cause of the present societal malaise.

It is possible to have both national standardization and some measure of local control. If a synthesis of the two could be devised that satisfied most of the needs for each, education would definitely benefit. Some schemes for the implementation of accountability could achieve a synergistic combination of national and local control; for instance, a voucher plan may have national funding, some measure of standardization in the EVA, and very local control--each parent chooses the school his children will attend. These possibilities are discussed in the next section. Another option is enhancing state control through federal bloc grants to states. Combinations of federal, state, and local control could implement such accountability concepts as teacher incentive pay and management by objectives. Virginia and Colorado have already passed statutes enumerating performance standards for local schools. State incentive payments for local performance is a logical next step. In practice, most of these issues and others mentioned in this section will play a significant part over the next few years in discussions of the changing role of local, state, and federal levels necessitated by revisions in public school finance.

IV ACCOUNTABILITY PLANS

Accountability--formal or informal, explicit or implicit--is a basic aspect of the administration of public education in its everyday operation, as well as in its nationally known innovative programs. The preceding section explored a wide range of problems, issues, and possibilities that are inherent in this facet of education. However, accountability is also the generic label given to a group of specific plans and approaches by which their advocates hope to hold the public school system "more accountable."

Five of these plans have been selected for analysis in this section. The plans are incentive pay for teachers, performance contracting, program planning and budgeting systems (PPBS), education voucher plans, and alternatives within the schools. These plans are disparate in many ways, focusing as they do on different aspects of educational accountability.

The major criterion for selection of these plans is current popular interest. However it is useful to determine their feasibility in terms of the following criteria.

- The degree of agreement among stakeholders on the objectives of the plan. The stakeholders include teachers, students, parents, principals, superintendents, taxpayers, and state and federal school officials.
- The state of the art in the tools and techniques of performance measurement required by the plan.
- The participants' consensus as to the adequacy of the above state of the art for implementation or experimentation.
- The clarity and position of the locus of responsibility, i,e., who is held accountable and who holds him accountable.

- The requirement for incremental financial resources to implement the plan.
- The willingness of stakeholders to participate.

In addition to criteria for determining feasibility, four major impacts on education should be considered in describing the accountability plans.

- The incentives and resources in the plan for innovative behavior.
- The changes in the distribution of decision-making power.
- The changes generated in the type and quantity of information available to administrators and the public.
- The probable public relations impact of the plan.

Incentive Pay for Teachers

Incentive pay for teachers was described in Section 2 as dating back to at least the 15th century. The incentive pay plans advocated today seek to replace or supplement a salary schedule based on education and longevity with a plan that provides rewards to teachers commensurate with performance.[28] The incentive is the salary differential granted to a teacher over and above the compensation paid those with similar academic preparation, experience, and instructional assignments.[29]

In most incentive pay plans, the incentive is awarded for superior performance in the standard teacher role. The most important variation is differentiated staffing in which different roles are created, e.g., apprentice teacher, teacher, master teacher, with increasing responsibility and pay.[30]

Among the objectives most frequently associated with incentive pay plans are to: (1) aid in recruiting and retaining superior teachers,

(2) improve the quality of instruction, (3) encourage the professional growth of teachers, and (4) make the teaching profession competitive with other professional fields.

The major technique that is needed to enable incentive pay to succeed is teacher evaluation. At present, the evaluative techniques are not very sophisticated and suffer from lack of general agreement on what is a good teacher. It is difficult to compare the performances of different teachers because of variations in class size, composition, and age; childrens' background, ability, and willingness to cooperate; and variations in the resources teachers have to work with.[31] Existing merit pay programs rely on classroom observation and evaluation by an administrator such as a principal; at present no teachers are evaluated in terms of their pupils' improvement in scores on tests such as standardized achievement tests. Evaluation by an administrator or other evaluator has several problems, such as lack of objectivity, lack of comparability between evaluators, and great variation between classroom situations and teacher actions from day to day. A successful incentive pay program usually has been worked out in advance by teachers, administrators, and the school board so that at least a fair measure of consensus exists that methods of evaluation are adequate. The most frequent cause of complaint once an incentive pay plan is put into effect stems from differences in personal judgment.

There is general agreement on the objectives of an incentive pay plan. The objectives can be written into teacher contracts or mandated by the school board. Parents and taxpayers in general are not concerned directly with the evaluation of teachers, and have little or no direct influence on teacher salaries. However, if public opinion should disagree significantly with the incentive pay evaluation of the teacher and enough public concern is manifested, then the incentive pay system may have to be changed to be more in accord with public sentiment.

In general, though, the public has expressed little interest in the operations of an incentive pay system for teachers.*

The program requires additional financing, since teachers are not willing to take cuts in salary that they may or may not get back as merit pay. Collective negotiations by teachers gives them the power to refuse such a plan unless they received incentive pay in addition to the basic salary. Teachers organizations generally have opposed incentive pay plans as resulting in a reduction of base salary increases that otherwise would be offered.

The locus of accountability in an incentive pay plan is precise, the individual teacher. Also, the responsibility for overseeing the teacher is clearly located in the evaluator, and the administrator or school board to whom he reports and who distributes the pay differentials. Incentive pay plans tend to improve the information and feedback to the managers of the school and to some extent the parents and general public.

Incentive pay also could be easily structured to encourage innovation and change in teaching practices. Added pay for innovation and experimentation could offset, to a great extent, the push for conformity in teaching practices fostered by teacher unions, collective bargaining, and pressures for assurance of educational results. The power structure in the schools would be left unchanged by incentive pay, except possibly that teachers who were adjudged superior might be given greater power and responsibility than less capable teachers.

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* An incentive pay plan has been suggested in which parents, as well as teachers, are rewarded for improved student performance. This poses additional problems and potential. (See Education Daily, October 11, 1971, p. 5.)

Incentive pay for teachers is politically feasible; it currently is being used in a relatively few school districts in cities and towns scattered across the country. Its usefulness in any situation is a function of the amount of politics, as opposed to educational issues, that governs its existence and workings.

Performance Contracting

The performance contract is an agreement between a group offering instruction and a school needing services.[32] Payment to the group offering services is made proportional to student achievement, usually as measured by standardized achievement tests and possibly some criterion-referenced tests. Unsuccessful contractors need not be rehired; thus innovations that fail can be eliminated from the school program with minimum financial loss to the school. The advocates of performance contracting see this technique of accountability as an umbrella under which the management and R&D capabilities of private firms can be directed toward the development and testing of improved educational techniques.[33] The performance contracting evaluation centers around the tests that are used to measure pupil attainment and improvement. The use of standardized achievement tests as a measure of short term achievement has been criticized extensively, yet criterion tests appropriate for most performance contracts are not widely available because of insufficient demand for commercial criterion-referenced tests.[34] The stakeholders agree on the deficiencies of these tests, but many school officials feel that they have something to gain from contracting out for services and that the measures are adequate for at least testing the program. Some private firms have been willing to be paid on the basis of the tests.

A performance contract makes quite specific the objectives for which the contractor is to work. Agreement on the objectives is a condition of getting the contract; thus it is no problem. The problem lies in

interpreting the objectives. For instance, many companies that have held performance contracts have been censured for "teaching the test"; that is, teaching specific items that appear on the test rather than teaching the more general subject matter of which the test is but a small sample. This completely defeats the purpose of standardized achievement tests, although it may not be deleterious with well-done criterion-referenced tests.

Since the objectives of performance contracting must be spelled out in such specific detail, it has been used for subjects in which specific goals are relatively clear, such as reading and arithmetic.

The cost of the performance contract is negotiable. However, in a number of instances, the target payments for a successful contractor can be set at about the per-pupil costs for teaching the subject.[35] Naturally, if the contractor is not completely successful, the school district does not pay out as much money. Thus, the school district might actually spend less if the students are not learning at an acceptable rate.

In some instances, the contractors reserve the right to be in charge of their own personnel; some rely heavily on lower-paid paraprofessionals to make a profit. Thus, additional costs could come in if the school district were required to compensate tenured teachers who have been replaced or let go by the performance contractor. However, many performance contracts adopt the "turnkey" approach, with part of the contract specifying the training of the district's personnel to take over and operate the contractor's instructional system after a specified number of years.

In general, performance contracting in its first major round of testing has been accepted at least as a test by most stakeholders, except the AFT. Public reservations center on the entrance of business into education; teachers see some danger to their jobs and income.

The locus of accountability is very precise; it lies with the group contracting with the school to perform the required services. The decision of who is to oversee them varies; the school board or the superintendent has the responsibility for hiring the group, but there is often some question as to their competence to judge the results. Therefore, the services of an outside evaluator, distinct from both the school and the group performing the services are often used.[36]

Performance contracting can be very useful as a device to take public pressure off the schools. When a school lets a performance contract, it transfers to another body the responsibility for teaching at least some subjects. If the teaching is unsuccessful, the public complaint can be directed as much toward the contractor as to the school; also, it provides the school a ready answer to complaints: "All right, next year we will change the contractor." Also, performance contracting offers an obvious avenue for instituting innovation and change. The contractor is relatively free and not restricted by previous operating practices of the schools, and thus has fewer disincentives to experiment.

Performance contracting, like incentive pay for teachers, is politically feasible and is actually in operation in some schools around the country.* However, most contracts are in areas of basic skills such as

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* The Texarkana performance contract with Educational Development Laboratories, Inc. has met with mixed success. Performance criterion referenced tests (based on EDL/McGraw-Hill Specific Learning 100 System) surpassed contract requirements: 78% of target students reached the goals and 58% significantly exceeded them. However, only 24% of the students achieved the objective of one or more years' improvement on reading and mathematics achievement tests. (Education Daily, October 11, 1971, p. 6.) First-year results in Behavioral Research Laboratories' performance contract in Banneker Elementary School in Gary, Indiana, have been called "encouraging," although it is too early to draw definite conclusions. (Education Daily, September 30, 1971, p. 6.) The several other less-publicized

reading and arithmetic with a few for dropout prevention or vocation skills. As performance contracting grows older as a practice, the technology needed to facilitate it may well be developed; there is a great chance that the groups doing performance contracting will acquire a greater knowledge and sophistication about the operations of a school and the mechanics of the learning process. At present, federal and state governments are aiding in the development of the potential of performance contracting by sponsoring demonstration and experimentation sites.

Program Planning and Budgeting Systems (PPBS)

PPBS is one of a number of plans that seek to integrate the efforts of individuals with the goals of the educational system and to arrive at an accord between the reward system and success in achieving the goals by showing resource inputs as a function of outputs by goals and objectives. Other plans that use similar methods and have similar rationales include management by objective and PERT.[37]

PPBS can use many of the techniques for enhancing quantitative improvement within the system that were mentioned earlier. Techniques for breaking goals down into discrete objectives and designing programs to achieve these objectives, as well as techniques to cost different programs, are needed by this accountability plan. Figure 3 shows the elements of PPBS.

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performance contracts have thus far met with similar qualified success. "Case Studies in Education Performance Contracting," a five volume series published by RAND, and Battelle Memorial Institute's forthcoming report on the OEO performance contracting experiment which took place during the 1970-71 school year, as well as the Appendix to this report, give more detailed information of the results of performance contracting to date.

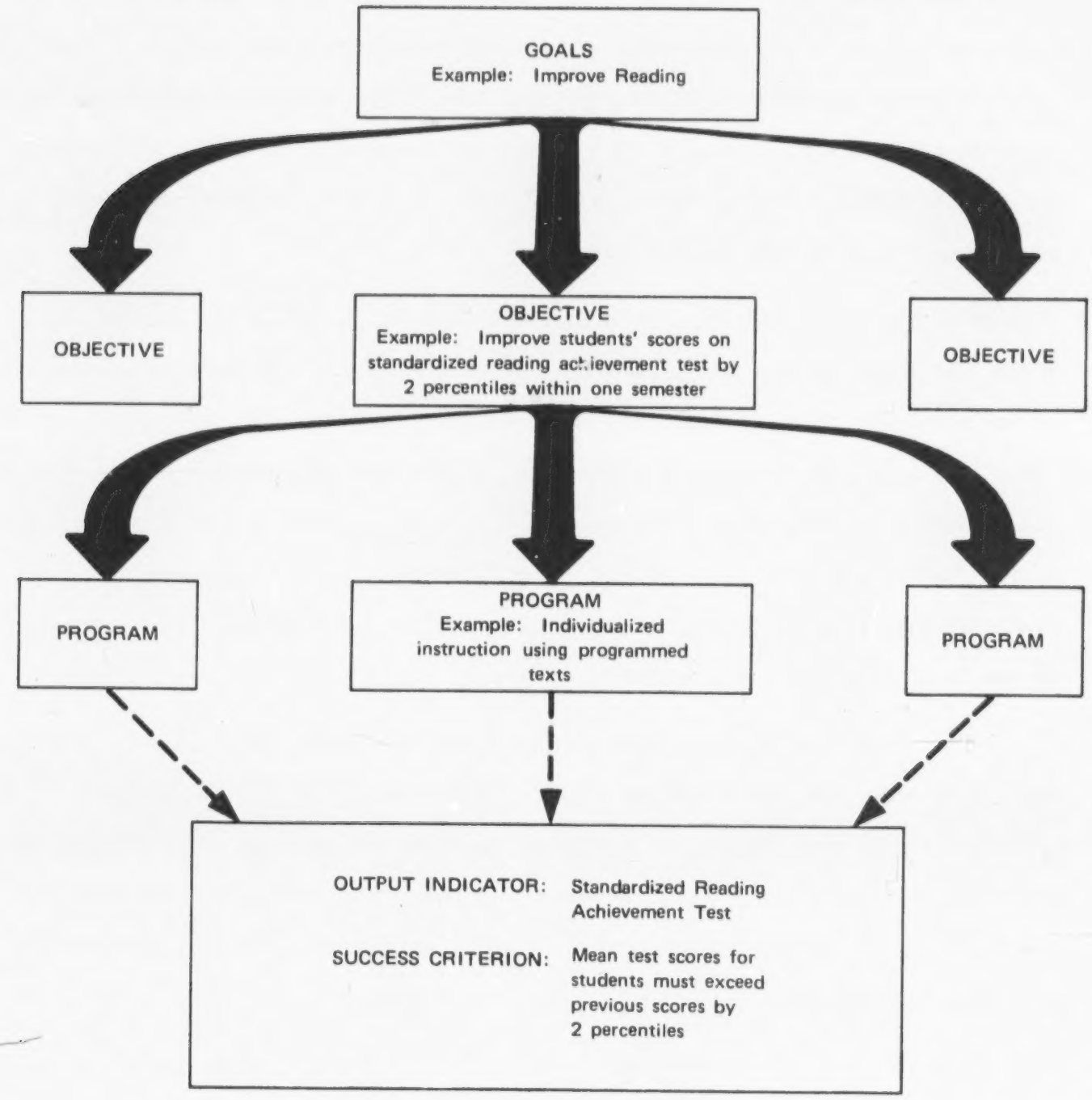
GOALS
Example: Improve Reading
OBJECTIVE
OBJECTIVE
Example: Improve students' scores on standardized reading achievement test by 2 percentiles within one semester
OBJECTIVE
PROGRAM
PROGRAM
Example: Individualized instruction using programmed texts
PROGRAM
OUTPUT INDICATOR: Standardized Reading Achievement Test
SUCCESS CRITERION: Mean test scores for students must exceed previous scores by 2 percentiles

FIGURE 3 ELEMENTS OF PPBS

A consensus on the usefulness of the general method exists, although many (especially teachers) feel that rigid divisions into categories, often primarily for budgetary purposes is not appropriate for a school.

State level PPB systems tend to focus on goals common to most communities in the state--reading and mathematics--thereby omitting more idiosyncratic community goals. This focus represents a significant weakness of PPBS since it biases the types of programs that PPBS encourages and might distort the division of resources between general societal goals and specific community goals.

Efforts to determine costs and benefits of a certain program are often resisted on the grounds that the important benefits are indirect or appear only over a long period of time. However, the problem is more often that of achieving any important objectives rather than comparing two successful programs. Agreement on the objectives which the plan is to pursue is not always present. The plan does bring disagreements on the most adequate objectives into the open, which in some cases results in the resolution of differences.

PPBS requires minimal additional funds to function; indeed, its aim is to make the best use of the funds available. The management system defines the locus (or loci) of responsibility; in most cases, it would be the principal, the teachers, or the superintendent or some combination of these. Innovation is not explicitly encouraged or discouraged by the plan.

If PPBS were as successful as originally hoped, it would increase the effective power in school systems of the higher administrative level in the local districts and the states. It also would increase the power of the school board and the public as the relationship of resources provided to results obtained became more visible.

Many schools across the country are using PPBS. Few schools, however, use it rigorously; most approximate its methods and use its rationales as they best apply to their own situations.* It is a plan that deals much less with matters of educational policy than any of the other plans and has provided little change in the day-to-day processes of teachers and students. It may well be that the most fruitful use of PPBS would be in conjunction with another of the accountability plans, such as incentive pay, performance contracting, or even educational vouchers.

Educational Vouchers

Vouchers have been proposed as a way for parents to choose the educational surroundings they deem best for their children. The government would give each parent a voucher which he in turn would give to the school in which he enrolled his child. The school would cash the voucher with the government for payment of the costs of education.

Each school is free to use any of the tools and techniques available in the state of the art in education. The voucher plan relies primarily on the market mechanism. Agreement on the objectives is presumed to be a function of the parents' choice of a school; if the variety of schools

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* The extent to which PPBS methods are actually in use is illustrated by a study done by Allen Schick, Budget Innovation in the States. Schick finds that while at least half the states claimed to be considering or adopting the new system, PPBS had penetrated the decision-making arenas of only one or two states. In the most innovative states--California, New York, Wisconsin, Hawaii, and Pennsylvania--PPBS has brought changes in budgetary terminology and techniques; however, it is still uncertain whether these states will use the new procedures in making their major program and financial decisions or whether the PPBS techniques will become just an additional layer of bureaucratic routine.

available corresponded to the variety of parent preferences in education, the diverse views should all be accommodated. The voucher plan will probably need additional financing to pay the costs for: (1) additional transportation, (2) the education of students currently attending private schools, (3) supporting tenured teachers whose services are no longer needed, and (4) loans or grants to aid in the formation of schools with different educational philosophies.

Stakeholder uneasiness about the voucher plan stems in great part from mistrust of any radical change. Until the voucher plan has been tried and possible results and implications evaluated, this mistrust will persist.

There are several variables that differ in the various versions of the voucher system: (1) whether parents will be allowed, compelled, or forbidden to supplement the value of the voucher from their own funds; (2) how the value of the voucher will be determined; (3) what the role of the government will be as far as supervision, consumer information, and accreditation of schools; and (5) whether vouchers will be for all grade levels, or just secondary and above, or just primary schools.[38]

The voucher plan will tend to receive the most support in communities whose educational facilities are in severe difficulties and who thus have less to lose. The locus of accountability is very clearly at the level of the single school; the responsibility for overseeing it lies jointly with the public and the educational voucher authority.

An educational voucher system would greatly change the power structure in the schools. The parents (and, indirectly, the students) would be given the choice of patronizing a given school or not. Public school managers thus would have many of their decisions influenced by public pressures to a much greater extent than they are today; also, they would be competing with private schools on a much more equal basis. Innovation

and change would be the prerogative of each school. Vouchers would provide information to and enhance the power of the consumers of schools services. Each school would be free to adopt any managerial information system that it wishes (e.g., management by objectives, PPBS) as long as information necessary to enable parents to choose schools was readily available.

Vouchers have a great but as yet untried potential for dealing with problems currently facing the schools from integration and provision of equality of opportunity to lessening public satisfaction with school performance. There is a need to experiment with vouchers. Unfortunately, the way in which vouchers have been described and publicized has led to a strong negative reaction from teachers, as well as from many others who perceive that vouchers are a direct attack on the existing public school system. At present, the political reactivity toward the voucher plan is so high that there is some doubt whether OEO will even be allowed to conduct field tests on the concept in the near future.

Alternative Schools Within the Public School System

Alternative schools constitute an attempt to gain many of the advantages of a voucher system without bringing private schools into the system of schools financed with public funds. The basic idea is that within a school district, or perhaps within several school districts, students will be able to attend any public school of their choice. Different schools could develop different programs and perhaps cater to different needs and desires of the students. The ideal of providing alternative matches to the different learning styles of students would be brought a step closer. Practically, alternatives within the public school system would result in a more limited range of choice than would the voucher plan.

No specific tools or techniques are needed to ensure the success of this plan, although the schools could take advantage of any increase in knowledge about the learning process and the role of the schools. There seems to be a growing consensus on the usefulness of this plan and its objectives.

Additional financing would be required only for the transportation of students who were attending schools farther away from their homes than before and for initial costs of instituting different programs. Resistance to the plan would probably center around the disinclination to change rather than any disagreement with the ideas of the plan. The locus of accountability is not precise, although presumably parent dissatisfactions would be directed to individual schools. Who is to have the responsibility to oversee the plan is not clear; some of the responsibility lies with the public, since it is up to the student and parents to choose a school, but the main responsibility lies with those in charge of the school district.

Alternative schools within the public school system do not radically change the distribution of power within the schools, but it does provide an avenue for innovation and change. If it can more nearly satisfy student and parent desires for specific content and instructional modes, some of the public pressure on the schools may decrease. In a similar manner, it may increase the amount of information the public can obtain about the workings of the public school system.

Alternatives within public schools might well be one way in which the schools could increase public satisfaction with their offerings.* Encouragement for widespread diversity could come from state or federal

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* The Fleischman Commission has suggested the formation of alternative schools within the public system for New York state.

support, and dissemination of information on successful programs in individual districts.

Summary and Conclusions

Table 1 summarizes the ways in which the five plans meet the criteria for feasibility. In general, the criteria are met as follows for all the accountability plans:

- There is generally little disagreement on the objectives of each accountability plan, although there is at times much disagreement on the objectives of the educational process.

- The current state of the art in the tools and techniques of objective performance measurement is inadequate to cope with many technical problems in the implementation of a plan. However, there is often agreement that while these tools and techniques are not fully satisfactory, it is possible to use them.

- Given the widespread scarcity of educational funds,* additional funds for testing or implementing accountability plans will not be generally available within the local district; state or federal funds are needed.

- Stakeholders are often unwilling to participate in accountability plans for a variety of reasons, including a disinclination to change, a feeling that efforts to make education more "efficient" are dysfunctional, and a dislike of bringing laymen or the business world into the educational process. However, when the schools seem to be functioning poorly, stakeholders are usually willing to try changes that do not directly undercut their own status or power.

- Since the plans discussed here are generated by a desire to increase the amount and specificity of accountability in the educational system, they all provide for a sharpening of the locus

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* See, for instance, Growing Protest Against School Costs, U.S. News and World Report, October 20, 1969, pp. 36-37.

Table 1

FEASIBILITY CRITERIA FOR ACCOUNTABILITY PLANS

Plan	Agreement on Accountability Plan Objectives	State of the Art of Performance Measurement	Consensus on Adequacy of Measurement Tools	Locus of Accountability	Requirement for Additional Financing	Acceptability to Stakeholders
Incentive pay for teachers	The objectives are widely acceptable, but details require close participation by school board-administrator-teacher. Some conflict over definition of "superior" teacher.	Little sophistication. Large deficiencies in both use of student output measures due to effects of other variables and classroom observation to assess process variables.	The operation of this plan is contingent on a consensus; this is one reason incentive pay plans are so little used.	Precise--located at the level of the individual teacher; policed by an appointed administrator or evaluational body.	Incentives may partially substitute for pay raises (and are fought for this reason) and are small amounts (several hundred dollars for 5 to 10% of the teachers).	Teacher organizations generally fight incentive pay (and differentiated staffing) others tend to support it.
Performance contracting	Objectives are stated in the contract and are subjected to public debate and often broad community development.	Restricted to "standardized tests" which are often only marginally appropriate to content of course.	Teacher unions criticize "teaching to test" in violation of the contract. But consensus on experimental adequacy appears to exist.	Precise--lies with the group, agency, or firm contracting with the schools.	Studies show that costs are consistent with other compensatory programs for which they tend to substitute.	Only the AFT directly challenges this plan, but teacher organizations (not necessarily teachers) are cool. General support by others for experiments at least.
Program planning and budgeting systems	In the process of aggregation for higher administrative levels, important local goals tend to be left out. Common goals are seen as too narrow by themselves.	Restricted set of educational performance measures; fiscal performance data are better.	General support but lack of consensus on specific plans.	Defined by the management system; could be the teacher, principal, superintendent, or some combination.	Minimal additional costs.	General support but disputes over details, emphases, and omissions.
Education vouchers	The thrust to give parents more power is disputed by many professionals. Some possible results (e.g., segregation) are seen as undesirable.	Performance assessment rests with each parent as supported by information provided by EVA.	This plan is so controversial there is no consensus on any part.	Not absolute--largely concentrated at the one-school level. Policed by the parents and the EVA.	Taxpayers would bear some cost of current nonpublic schools. Other large experimental and startup costs occur for public schools.	Complete rejection by organized educators and many others. Strong support by some stakeholders; much conflict.
Alternative schools within public school system	Has some of the advantages of the voucher plan but gives educators enough control that they will support it.	Programs tend to be tailored more to the individual with subjective assessment predominant.	Adequate consensus to support development; consistent with professional self-image if not practice.	Not precise--perhaps at a one-school level, perhaps at the program level, perhaps at the district level.	Some additional cost depending on nature of the programs.	Supported by most in theory but hampered by institutional inertia in practice.

of accountability. Some plans place the locus of accountability clearly with one person or agency; others distribute it among several loci.

The plans vary greatly as to the impacts they have on the educational system: the increased or decreased potential for innovation, change in the distribution of power, the effect of the public image of the schools, and the increased administrative and consumer use of information. The impacts of each plan in these areas are summarized in Table 2.

Although each accountability plan can be judged on the same set of feasibility criteria and possible impacts, the plans are not homologous, that is, they cannot always serve as substitutes for each other. Combinations of the plans could be very useful. For example, PPBS cannot really be considered as an alternative to incentive pay for teachers; rather, the two plans could be used to complement and strengthen each other. Similarly, any of the other plans could be used with the voucher plan. For another thing, the plans may be implemented at different administrative levels. Incentive pay for teachers and performance contracting can be chosen by one school or a district, while vouchers require special state legislation and very probably a state mandate and incremental state or federal funding. PPBS, management by objectives, and alternatives within the public school system can be implemented at the local level or can be suggested or mandated for statewide implementation. The five plans, then, are appropriate for different needs and different situations.

Let us examine the circumstances in which each plan might be most appropriate. If a policymaker wanted to determine which plan he might use to best advantage to increase and sharpen the accountability within the school(s) under his control, three relevant variables are (1) his administrative level (local or state), (2) where he perceives the basic problem of the educational system to be located, and (3) who he feels has the resources and understanding required to solve the problem.

Table 2

IMPACTS OF ACCOUNTABILITY ON THE EDUCATIONAL SYSTEM

Plan	Innovation	Effect on Power Distribution	Effect on Public Image	Management Information	Public Information
Incentive pay for teachers	No new classroom resources; small incremental amounts of innovation.	Differentiated staffing will increase power of good teachers.	Little change except possibly in the image of the teaching profession.	Large increase in area of teacher evaluation and review; training needs.	Minimal.
Performance contracting	Great--all the innovation firms can provide.	Increases power of school board relative to the staff; greater influence of private firms.	Makes schools look more innovative and may produce positive results.	Objective performance measurements of program against specific outputs greatly increase.	Same as school board receives.
PPBS	Innovation mainly in response to highlighted ineffective educational expenditures.	Increases information and power of higher administrative levels.	Dependent on school performance reported by the system.	Increases information to higher administrative levels.	Tends to objectify and make more public information on school performance.
Education Vouchers	Large potential--depends on desires of parents.	Drastically increases the power of the parents; increases power of nonpublic schools.	Positive image initially; long range effects depend on ability to create desired options.	Same information as parents receive.	Information provided parent on full range of school operation and outputs by education voucher authority.
Alternatives within the public schools	Moderate potential--frees resources within the system for new approaches.	Increases the power of parents and innovative teachers.	Improvement through reduction in conflict as alternative needs are met.	More information on possible options and match of students and programs.	Information on match of students and programs.

The functions of the state level that concern accountability fall in the areas of allocation, regulation, and leadership. If administrators on the state level feel that the information necessary to act intelligently in these areas is not available, they may institute an accountability plan such as PPBS that increases and improves the flow of information. If they feel that their information is adequate but that local schools and districts lack an adequate interior information system, then the state might mandate or recommend PPBS for local use. Several states have done this, although the technical and political problems encountered in the early use of this plan have diminished the original enthusiasm.

If administrators on the state level feel that the problem with the educational system lies in the classroom, they can either rely or professionals within the system for the solution, or they can look outside of the formal public school system for the solution. Inside public education, teachers can be encouraged with incentive pay plans (the state of Florida has set up a commission to develop guidelines for teacher incentive pay within the state). Schools can be encouraged to develop alternatives within the public system; (the Fleischman Commission in New York state is recommending such alternatives within the system as a means of improving the schools and increasing parent satisfaction with public education). If administrators feel that resources for solution lie outside of the present system, then a plan such as educational vouchers may be appropriate. Currently, enabling legislation to allow vouchers on an experimental basis is being considered in California and Washington. Alternatively, the state could encourage school districts to use the resources of private firms through performance contracting.

If an administrator on the local level felt that his information system was inadequate, he could institute an accountability plan such as PPBS. Likewise, incentive pay for teachers could be instituted if the problem with the local schools seemed soluble by supporting more strongly the competent teachers. If outside help seemed necessary to cope with problems in specific areas, performance contracting might be adopted to improve pupil performance in those areas. If the uniformity of curricular choice offered by all the schools in the district seemed to conflict with parent and pupil desires, a district could set up an alternative school system within the public schools, as Berkeley, California, has chosen to do.

Naturally, the decision to use any accountability plan will rest on political and administrative factors, as well as on the assessment of what the problem with the schools is and who is competent to solve it. In areas where teacher unions are especially powerful, plans that they tend to oppose (incentive pay, performance contracting, and educational vouchers) may be less feasible. Also, in different states and districts the educational and political traditions might make different plans appropriate; in Gary, Indiana, for example, the choice of performance contracting as the sole means of running an entire school was dictated in part by its history of experimentation and change.

The concerns discussed above center on the state and local levels. None of the plans provides for any federal role, other than, perhaps, that of disburser of funds. Some activities that the federal government (and the states as well, in some instances) might undertake to strengthen the accountability in the educational system are:

- The provision of any additional funds needed to implement a plan.
- The funding of research on tools and techniques needed by the plans.

- The funding of research on the effectiveness of different plans for different purposes.

- The dissemination of information on alternatives available to local districts and their advantages and disadvantages.

- The provision of a "labor mediation board" to aid in the settlement of disputes over contracts with teachers, performance contractors, etc.

- The formation of state or national policies and guidelines on minimum provisions for accountability--perhaps as little as suggestions for budgetary forms.

This report began by emphasizing that accountability was not merely a new plan for renewing the public education system but an integral part of the regulation of any institution. This led to a broad examination of the nature, problems, and issues of accountability. As an integral part of the way the educational system identifies, analyzes, and attempts to solve problems, accountability is thrust into prominence only when current school methods are perceived to be failing and new methods are being sought. The specific accountability plans discussed in this section have been developed by their advocates to provide such new methods.

Public education is beset by critics who endeavor to identify and solve its problems by labeling; for every perceived problem, there is a catchword that identifies problem and/or solution. If accountability is to be more than just such a catchword, the institution of an accountability plan must be accompanied by change in the shape of the educational structure, by change in the distribution of power and responsibility. Without such change, accountability will go down in history as did the enthusiasm of the 1910s for bringing business methods into education: a futile attack on a very real problem.

Appendix

COMPARISON OF HISTORICAL AND CONTEMPORARY MOVEMENTS FOR ACCOUNTABILITY

By

Paul Chapman

60/61

Appendix

COMPARISON OF HISTORICAL AND CONTEMPORARY MOVEMENTS FOR ACCOUNTABILITY

"The term educational accountability, as used most recently by certain economists, systems analysts, and the like, has frequently been based on a conceptualization that tends, by analogy, to equate the educational process with the type of engineering process that applies to industrial production. It is this sort of analogy, for instance, that appears to underlie the proposals for "guaranteed performance contracting" as exemplified in the much-publicized Texarkana project. The analogy is useful to a point. But there is also a point beyond which it can be so seriously misleading as to undermine any sensible efforts to develop objective criteria of professional accountability.

It must be constantly kept in mind that the educational process is not on all fours with an industrial process; it is a social process in which human beings are continually interacting with other human beings in ways that are imperfectly measurable or predictable."

Henry Dyer
PDK, December 1970

"If to these are added instructional technology and modern educational management theory, a new and valuable interdisciplinary field emerges. This body of knowledge, skill and procedure can be called educational engineering. Why couple the term "engineering" with education? Why more apparent dehumanization? . . . Engineering has traditionally been a problem-solving activity and a profession dedicated to the application of technology to the resolution of real-world difficulties and opportunities. While the teaching-learning

environment differs from the world of business and industry, some rationalization of the two subcultures may be beneficial."

Leon Lessinger
PDK, September 1970

". . . the era of contentment with large, undefined purposes is rapidly passing. An age of science is demanding exactness and particularity.

The technique of scientific method is at present being developed for every important aspect of education. Experimental laboratories and schools are discovering accurate methods of measuring and evaluating different types of educational processes. Bureaus of education measurement are discovering scientific methods of analyzing results, of diagnosing specific situations, and of prescribing remedies. Scientific method is being applied to the fields of budget-making, child-accounting, systems of grading and promotion, etc."

Franklin Bobbitt
The Curriculum, 1918

"Shall we turn education over to corporate enterprises which has avariciously exploited and depleted our resources with no eye to the future? Shall we turn education over to corporate boards of directors who are still reluctant to consider the terrible blights they have created on the ecological landscape? Shall we turn our children over to profit-motivated business managers who have a long record of sacrificing human values to the almighty dollar? Shall we allow a fragmentation of the school population, leaving the establishment of educational values to the vagaries of persons whose basic motivations may be at complete odds with the well-being of society?"

Larry Sibelman
The American Teacher, 1970

The statements by Lesinger, Dyer, and Sibelman document the current controversy about the appropriateness of the business-efficiency model in education. But as the passage from Bobbitt's landmark work suggests, a call for educators to initiate reform in the schools by adopting more rigorous, more efficient methods of measuring and evaluating output is not new. In fact, recent literature on the history of U.S. education indicates that the business-education link has grown steadily since the beginnings of the public school system. According to studies by David Tyack and Michael Katz,[39,40] the bureaucratization and centralization of the common school in the late 19th century followed the lines of business corporate organization. Hugh Hawkins has also investigated the relationship of industry and the emerging university at the turn of the century.[41]

Early Demands for Efficiency in Education

Raymond Callahan's Education and the Cult of Efficiency, more than any other study raises striking comparisons between the early 20th century use of business methods in education and the accountability surge of today.[42] He traces the tremendous impact of the book Principles of Scientific Management (1911) by Frederick W. Taylor, whose organizational ideas were applied to virtually all phases of U.S. society. Callahan believes that "very much of what has happened in American education since 1900 can be explained on the basis of the extreme vulnerability of our schoolmen to public criticism and pressure" and that "this vulnerability is built into our pattern of local support and control."

What advantages and disadvantages can we expect from our new efficiency experts? How "vulnerable" are school administrators today to the pressure for accountability and efficiency? Will the current quest for efficiency result in yet another "descent into trivia" and a second "tragedy of American education?"

The current trends are most dramatically illustrated by the sudden emergence of performance contracting. Much has been written and said about performance contracts in the past two years, continuing the old debate over the appropriate relationship between business and education. The passage from Bobbitt's 50-year old work puts a current dialog between two schoolboard members in a different perspective:[43]

> They (the public) don't give a damn about those administrative niceties. They want results and it's our boardroom they storm when they don't get them. If performance contracting can provide us with a means of demonstrating the results the public wants--and is entitled to--then I'm for it.
>
> Performance contracting . . . can never be allowed to become one more of those terrible infusions that are making education less humane and less child-centered, at the very time that education needs to address itslf more singularly than ever to the human needs of the individual child.

At least since the Civil War, the U.S. business community has influenced in varying degrees the membership, content, and aims of the educational system. The recent development of performance contracting is a new and potentially radical phase of the business-education symbiosis, but the concept of the schools borrowing techniques and philosophies from business managers to achieve greater rigor and productivity is not new. We can gain a valuable perspective on the accountability issue by comparing the current period with the early 20th century reform era on five counts: (1) the substance of business techniques in the schools, (2) the reform climate, (3) the nature of school criticism, (4) efficiency as a panacea, and (5) efficiency's effects on education.

The Role of Business in Education: Principles and Mechanics

Taylor's Principles of Scientific Management was not directed exclusively at the schools, but rather dealt with general rules for an

efficient system of management in industry. His theory was derived from three case studies of manual-labor--bricklaying, work at a ball-bearing plant, and loading pig iron at the Bethlehem steel yards. First brought to public attention during Interstate Commerce Commission investigations into the causes of railroad bankruptcy, the system was quickly and enthusiastically applied to many areas as diverse as the army, navy, law, church, home, and education. When applied to the schools, Taylorism meant that a great deal of attention had to be paid to the many mechanical and often superficial aspects pertaining to the organization and day-to-day operation of the school. Since the ideas were originally developed in relation to the industrial work process, the theory had nothing to say about curriculum and instruction. But the decision of school administrators to accept what was in essence a "factory model" for school management implicitly subordinated the strictly educational aspects of the institution to those concerned with plant, maintenance, and operation.

When the efficiency experts of this period did conduct their analysis in terms of students and "educational output," the results were usually trivial exercises in number pushing. One example is a study of "retardation and elimination" in city school systems entitled Laggards in Our Schools, published in 1909 by Leonard Ayres. The work purports to arrive at an "index of efficiency" for the public schools of 58 different cities, based on the percentage of "raw materials" (entering students) that they are able to retain, process, and "get out."

The analogy between performance contracting and scientific management is not strained. The underlying purpose of each is to gain greater productivity from human labor. Each relies on a "one best method," whether it concerns purchasing school supplies or learning to read. Taylor's management system used five basic steps--time and motion studies, improvement of tools, analysis by experts, standardization for the entire

system, and task-reward motivation. Performance contracting operates analogously--development of a science of reading, improvement of educational materials such as programmed reading machines, educational technology companies offering expert advice, standardization of the system, and task-reward motivation.

When and how have educators adopted these systems? What effect have they had on the instruction of the child?

The Reform Ethos

The rise of the educational efficiency expert in 1911 and again in 1969 rested on three preconditions: (1) prevailing sentiment in favor of reform, (2) a vogue for business techniques in all areas of society, and (3) economic pressure which made efficiency a prime concern. In 1911, Progressivism and the Square Deal had created a climate for change. Specific school developments also paved the way for this efficiency expert. The newly-created, centralized boards of education sought to reduce inefficiency by consolidating functions, reducing membership, and "taking education out of partisan politics." Industry pressured educators for a more practical curriculum to serve business' rising manpower needs. Also, around 1911 scientific management was applied to a variety of governmental and social institutions. Thus, according to Callahan, several factors created a situation ripe for Taylor's "gospel of efficiency"--the dominance of businessmen and their values, a new cost-conscience and reform-minded public, an attack on the mismanagement of all American institutions, and the rising cost of living.[44]

Similar factors seemed to be operating early in 1969. The legislative change during the Kennedy-Johnson years created an ethos of reform,

while the Vietnam War and the inflationary depression since 1968 produced the dual desire for change and efficiency. Since the decline of progressive education in the 1950s and the shock of Sputnik, business and technological values have gained a new legitimacy for the schools. PPBS and the cost-effectiveness were instituted by Robert McNamara in the Department of Defense, suggesting that perhaps the public was ready to accept business solutions for the mismanagement of U.S. institutions. Raymond A. Ehrle recently made the connection between reform and efficiency:[45] "In this day of increased competition for national resources . . . it is expected that performance contracting will be increasingly relied upon to meet the vast number of priority projects and problems which must be addressed." Thus while performance contracting appears to be a new historical phenomenon, it rises out of conditions very similar to those that produced the first cult of efficiency.

The Criticism of the Schools: Muckrakers and Vulnerability

In 1911 and again in 1969 the unique combination of intense criticism of the schools and the extreme "vulnerability" of school board members and superintendents accounted for the rapid acceptance of industrial technology in the schools. Witness, for example, the kind of criticism leveled at the New York schools in the very year Taylor's Principles was published. Why, asked Simon Patten, a well-known educator and economist, should New York support "inefficient school teachers instead of efficient milk inspectors. Must definite reforms with measurable results give way that an antiquated school system may grind out its useless products?"[46] And witness, too, the process by which efficiency experts made changes that the public rapidly sanctioned. Jesse B. Sears, a leader of the school survey movement, described how criticism brought the business model to education:

> With a critical public opinion demanding economy and efficiency, and with a new conception of education growing rapidly into a science of education, we had both the motive and the means by which the survey movement could take form. . . . Naturally, then, when boards of education called upon educational experts to help point the way out of difficulties, the idea was promptly understood and sanctioned by the public, and the school survey movement had begun.[47]

The intense pressure for school reform has resulted in part in the rapid development of performance contracting. Recall the first board member who said, "If performance contracting can provide us with a means of demonstrating the results the public wants--and is entitled to--then I'm for it." A recent survey (December 1970) showed that although 89 percent of administrators surveyed thought their teachers were "doing their jobs well today," 72 percent were also in favor of "making teachers formally accountable in some way for the academic performance of their students."[48] Compelled on the one hand to defend the status quo, forced on the other to demonstrate results, administrators naturally look for a means to alleviate the public pressure--and performance contracting is a likely avenue to pursue.

The climates in 1911 and 1969, while similar in the mere presence of hostile criticism and schoolboard vulnerability, were not entirely analogous. For one, the nature of the criticism was different. Muckrakers in the early 1900s called for better resource allocation and lower expenditures. They had no quarrel with the free enterprise system--they just wanted to oil the machinery. The critics of the 1960s called for this and more. For the first time they wanted better results. Their criticism probed to greater depths and questioned the validity and legitimacy of the public school itself.[49] The administrators in 1911 also were less well organized as a profession, and teachers were only beginning to unionize. Overall, school personnel were more vulnerable in 1911 and consequently responded to pressure more rapidly. By 1969 school

administrators had closed ranks, and while sensitive to criticism they did not demonstrate as rapid a response as 50 years earlier. Their respect for the increasing militancy and political strength of teachers' unions has also been a sobering factor.

The Great Panacea

Differences in the reform climate, the nature of criticism, vulnerability, and the extent of support and opposition accounted for the varying speed of responses. The earlier adoption of scientific management was lightning fast and all-encompassing. According to Callahan, it became a "great panacea" for U.S. educators and public. Although the initial support for performance contracting has been equally sudden in many school districts; how long lasting the effect will be still looms as a very large question.

Scientific management's supporters were both numerous and influential. Businessmen, "efficiency agencies," superintendents, most school board members, professional educators and administrators (e.g., Frank Spaulding, Franklin Bobbitt, and Ellwood P. Cubberly) all backed scientific management with evangelical fervor. The advocates claimed it provided an enriched program and saved tax dollars, but says Callahan, "It is also clear that the economy feature was the primary factor in its appeal.[50]

The opposition was scattered, unorganized, and for the most part "unavailing" in its dissent. Samuel Gompers spoke for the fledgling American Federation of Labor in 1911 when he protested that efficiency experts were just one more management device to "get the most out of you before you are sent to the junk pile.[51] Robert Hoxie, investigating the system for the U.S. Commission on Industrial Relations in 1921, warned that many efficiency experts were "fakirs" and "industrial patent-medicine

men."[52] A few renegade administrators like William E. Maxwell of New York City noted the faddism involved:

> In the first stage, everything hitherto done in the schools is wrong; in the second stage, if the new theory receives any popular support, everything will be well; the new subject or the new method is a panacea that will cure all educational ills; in the third stage, the practical teachers have divested the new theory of its superfluous trappings, have swept away the preposterous claims of its advocates, and have discovered and used whatever small kernel of truth it contains or conceals. . .[53]

A few teachers in cities where unions were strongest ventured to oppose scientific management. Benjamin C. Gruenberg gave the strongest rebuttal in 1911 when he said:

> We have contested to measure the results of educational efforts in terms of price and product--the terms that prevail in the factory and the department store. But education, since it deals in the first place with organisms, and in the second place with individualities, is not analogous to a standardizable manufacturing process. Education must measure its efficiency not in terms of so many promotions per dollars of expenditure, nor even in terms of so many student-hours per dollar of salary; it must measure its efficiency in terms of increased humanism, increased power to do, increased capacity to appreciate.[54]

Will performance contracting bring a new cult of efficiency? At this point, it is difficult to gauge the future of industry's reentry into education. Plans for educational television and computers, devices that were to revolutionize education, have failed to meet expectations, prompting one businessman to ask recently, "Has the Education Industry Lost Its Nerve?"[55] But performance contracting exploded on the scene much like scientific management entered Taylor's Principles in 1911. Launched in 1969 as a dropout retention program in Texarkana, Arkansas, performance contracts in the 1970-71 school year were operating in more than 170 school districts. Educational technology companies have increased

ten-fold since 1969 to more than 100. In July of 1970, the federal government increased its support by awarding $6.5 million dollars for contracts and enlisted The RAND Corporation to study the projects and prepare a guide for schools contemplating a future contract. Judging from the recent flood of journal articles on performance contracting and accountability, historians 20 years from now might well conclude that this was a new efficiency cult on the rise.

The adamant resistance offered by the American Federation of Teachers summarizes some of the opposition's points of contention. Robert Bhaerman, director of research for the AFT, has called performance contracting a Nixon-big business plot designed to absorb the new demands for work as military and space contracts are cut back. In its official news publication, the American Teacher, the AFT has leveled the charges that performance contracting takes the determination of educational policy out of the public control, threatens to create a highly potent business monopoly in education, tends to dehumanize the learning process, sows distrust among teachers, promotes teaching to the test, subverts collective bargaining by reducing teacher input, and is unsound in its machine orientation.[56] The AFT has threatened strikes in several cities where performance contracts, or some other accountability scheme, have been initiated, notably in Gary, Seattle, and Washington, D.C.

However, the majority opinion seems to be one of wait and see. Industry remains cautious since profits are frequently uncertain. High start-up costs and single-year OEO grants have kept the larger research and publishing companies from entering the field. The average break even point, for instance, is a reading increase of 1.6 grade levels, or roughly three times the national yearly advance. The National Education Association, while deploring "the OEO performance contracting program" because it will "weaken the structure of the public school system and . . . discredit the school in the eyes of the public," has tentatively approved

contracts between school systems and teacher unions.[57] School administrators, as represented by the earlier quotations, appear divided as a recent poll shows.[43]

If the "age of accountability" did dawn in Texarkana, and performance contracting is to spearhead the movement, the proof is still several years away.

A Tragedy of American Education?

Callahan concludes that "the wholesale adoption of the basic values, as well as the techniques of the business-industrial world, was a serious mistake in an institution whose primary purpose was the education of children.[58] Two major questions arise. One question is, was there a "tragedy?" Is there no room for the so-called business tools and techniques in education? Were there any benefits from the use of scientific management? The other question is whether there will be a new cult of efficiency in the 1970s?

Perhaps the best way to approach the first series of questions is to note the attractiveness of contractors' claims for their product; performance contracts promote management efficiency and intelligent cost consciousness, provide an excellent method of teaching certain basic skills, individualize instruction, can be institutionalized and integrated into the present system through the "turnkey" approach, and help to increase the student's self-concept through behavior modification and frequent rewards. Some of the smaller concerns can be easily remedied through close and accurate controls--contractor dishonesty, fake companies, teaching to the test and antiteacher bias. Deeper and more fundamental issues, however, cast doubt on the entire concept. There is the danger that "accountability" will become a new panacea--yet another sandbox for school officials to stick their heads in. Performance contracting rests on several questionable assumptions--that teaching skills can be fragmented, that

reading skills have little to do with verbal skills and can be taught solely by programmed instruction, and that education is merely a process of absorption rather than critical thinking.

Will there be a new "cult of efficiency?" To a certain extent the first age of efficiency has never passed. A fundamental criticism of Callahan's study is that it fails to recognize the infusion of business values in schools during the 19th century, a process uncovered several years later in the research of David Tyack and Michael Katz. The events after 1911 did not represent a detour. Like the performance contracting movement, they were part of a broad history of business in education.

To be sure, there seem to be too many reluctant persons who are opposed to performance contracting to allow this particular accountability measure another conquest in the fashion of scientific management. The question is whether accountability will gradually become the order of the day in school districts across the country, i.e., whether there is enough dissatisfaction among students, parents, and educators to compel individual districts to seek out the kind of plan that is well suited to their needs. It is not generally feasible for a performance contractor to take over all managerial and educational responsibilities as happened in Gary, Indiana. In other words, if there is to be a new wave of efficiency in education--the growth of an era of accountability--then the change will be incremental rather than sudden and large scale. No one method such as performance contracting will win nationwide support as scientific management did a half-century ago. Only time will tell to what extent the entrenched, bureaucratic educational system--in part a product of that proliferation of Taylorism in the early 20th century--will prove capable of yielding to this or any other form of significant reform.

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